

WHAT IS CLAIMED IS:

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2 1. A tool chuck for a rotary power hand tool of the type which has an
3 elongated generally cylindrical housing containing a motor having a motor output
4 shaft with a hollow end portion and a threaded outer surface extending from a nose
5 end thereof, the housing having a generally cylindrical nose end portion that is
6 concentric with said motor output shaft, said nose end portion having at least one
7 light emitting device that directs light generally in a direction that is parallel to the
8 output shaft, said tool chuck comprising:

9 a cylindrical body portion having a concentrically aligned conically shaped
10 chamber, the top of which communicates with a tool opening, a base portion
11 having a threaded base opening communicating with said chamber, said base
12 portion being threadable on the motor output shaft;

13 an annular cylindrical light transmitting portion attached to said body
14 portion for transmitting light from the light emitting device of the hand tool to the
15 area of the tool shank inserted into said tool opening.

16 2. A tool chuck as defined in claim 1 further comprising

17 a core positioned in said chamber and base opening, said core having a
18 stem portion configured to extend into the hollow end portion of the motor output
19 shaft, said core having an annular flange configured to contact the end surface of
20 said output shaft;

21 a plurality of elongated jaws positioned in said chamber and configured to
22 be moved inwardly to contact and hold a tool shank inserted into said tool opening
23 as said core is moved toward said tool opening when said base portion is threaded
24 onto the motor output shaft.

25 3. A tool chuck as defined in claim 1 wherein said light transmitting
26 portion is a transparent material.

27 4. A tool chuck as defined in claim 3 wherein said transparent material
28 is polyester.

1 5. A tool chuck as defined in claim 1 wherein the surface of said light
2 transmitting portion closest to the free end of the tool is angled inwardly to direct
3 transmitted light inwardly toward the axis of said tool.

4 6. A tool chuck as defined in claim 2 where said plurality of elongated
5 jaws comprises three jaws that are generally equally spaced around the periphery
6 of said conical chamber.

7 7. A tool chuck as defined in claim 2 further comprising at least one
8 spring for biasing said jaws toward the periphery of said chamber.

9 8. A tool chuck as defined in claim 1 further comprising a grip material
10 bonded to said light transmitting portion.

11 9. A tool chuck as defined in claim 8 wherein said grip material is a
12 resilient rubber or rubberlike material.

13 10. A tool chuck as defined in claim 1 wherein said light transmitting
14 portion has a surface configuration that is conducive to a user gripping the same to
15 selectively thread it on and off of the motor output shaft.

16 11. A tool chuck as defined in claim 10 wherein said surface
17 configuration is in the form of axially oriented raised ribs spaced from one another
18 around the periphery of the light transmitting portion.

19 12. A tool chuck as defined in claim 1 wherein said body portion has a
20 raised hex head portion adjacent said tool opening.

21 13. A tool chuck as defined in claim 1 wherein the hand tool has two
22 light emitting devices located on opposite sides of the output shaft, spaced apart
23 from one another approximately the same distance as the diameter of said light
24 transmitting portion of said tool chuck.

25 14. Apparatus for use with a rotary power hand tool of the type which
26 has an elongated generally cylindrical housing containing a motor having a motor
27 output shaft with a hollow end portion and a threaded outer surface extending
28 from a nose end thereof, the housing having a generally cylindrical nose end
29 portion that is concentric with said motor output shaft, said nose end portion

1 having at least one light emitting device that directs light generally in a direction
2 that is parallel to the output shaft, said apparatus comprising:
3 a tool chuck configured to be attached to the motor output shaft and being
4 rotatable thereon to selectively tighten and loosen a tool shank placed in the
5 chuck;
6 an annular cylindrical light transmitting portion attached to said body
7 portion for transmitting light from the light emitting device of the hand tool to the
8 area of the tool shank inserted into said tool opening.

9 15. Apparatus as defined in claim 14 wherein said light transmitting
10 portion is a transparent material.

11 16. Apparatus as defined in claim 15 wherein said transparent material is
12 polyester.

13 17. Apparatus as defined in claim 14 wherein the surface of said light
14 transmitting portion closest to the free end of the tool is angled inwardly to deflect
15 transmitted light inwardly toward the axis of said tool.

16 18. Apparatus as defined in claim 14 further comprising a grip material
17 bonded to said light transmitting portion.

18 19. Apparatus as defined in claim 18 wherein said grip material is a
19 resilient rubber or rubberlike material.